

# ***Appendix F***

## ***CWNS 2004 Needs Categories***

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**Table F-1. CWNS 2004 Needs Categories**

Category	Name	Description
I	Secondary Wastewater Treatment	The minimum level of treatment that must be maintained by all treatment facilities except those facilities granted waivers of secondary treatment for marine discharges under section 301(h) of the Clean Water Act. Treatment levels are specific in terms of the concentration of conventional pollutants in the wastewater effluent discharged from a facility after treatment. Secondary treatment typically requires a treatment level that will produce an effluent quality of 30 mg/L of both BOD <sub>5</sub> and total suspended solids, although secondary treatment levels required for some lagoon systems may be less stringent than this. In addition, the secondary treatment must remove 85 percent of BOD <sub>5</sub> and total suspended solids from the influent wastewater. Needs necessary to achieve a secondary treatment level should be included in this category. Needs to address failing septic and decentralized wastewater treatment systems were reported in Category I in previous surveys.
II	Advanced Wastewater Treatment	A level of treatment that is more stringent than secondary treatment or produces a significant reduction in nonconventional or toxic pollutants present in the wastewater treated by a facility. Needs reported in this category are necessary to attain incremental reductions in pollutant concentrations beyond basic secondary treatment. Advanced treatment may include additional process units to increase the level of treatment to the level of potable, or less than potable but greater than that normally associated with surface discharge needs. For 2004, this category may also include additional process units to increase level of treatment to allow for water reuse.
III-A	Infiltration/Inflow (I/I) Correction	Control of the problem of penetration into a sanitary or combined sewer system of water from the ground through such means as defective pipes or manholes (infiltration) or from sources such as drains, storm sewers, and other improper entries into the system (inflow). Included in this category are costs for correction of sewer system infiltration/inflow problems. Costs also are reported for preliminary sewer system analysis and for detailed sewer system evaluation surveys.
III-B	Sewer Replacement/Rehabilitation	Reinforcement or reconstruction of structurally deteriorating sanitary or combined sewers. This category includes cost estimates for rehabilitation of existing sewer systems beyond those for normal maintenance. Costs are reported if the corrective actions are necessary to maintain the structural integrity of the system.
IV-A	New Collector Sewers and Appurtenances	Pipes used to collect and carry wastewater from a sanitary or industrial wastewater source to an interceptor sewer that will convey the wastewater to a treatment facility. The needs in this category include the costs of constructing new collector sewer systems and appurtenances.
IV-B	New Interceptor Sewers and Appurtenances	Major sewer lines receiving wastewater flows from collector sewers. The interceptor sewer carries wastewater directly to the treatment facility or to another interceptor. The needs in this category include costs for constructing new interceptor sewers and pumping stations necessary for conveying wastewater from collection sewer systems to a treatment facility or to another interceptor sewer. Costs for relief sewers should be included in this category.

**Table F-1. CWNS 2004 Needs Categories (continued)**

Category	Name	Description
V	Combined Sewer Overflow (CSO) Correction	Measures used to achieve water quality objectives by preventing or controlling periodic discharges of a mixture of stormwater and untreated wastewater (CSOs) that occur when the capacity of a sewer system is exceeded during a rainstorm. This category does not include costs for overflow control allocatable to flood control or drainage improvement, or for treatment or control of stormwater in separate storm and drainage systems.
VI	Stormwater Management Program	Stormwater is defined as runoff water resulting from precipitation. This needs category includes activities to plan and implement municipal stormwater management programs pursuant to National Pollutant Discharge Elimination System permits for discharges from municipal separate storm sewer systems. These include structural and nonstructural measures that (1) reduce pollutants from runoff from commercial and residential areas that are served by the storm sewer, (2) detect and remove illicit discharges and improper disposal into storm sewers, (3) monitor pollutants in runoff from industrial facilities that flow into municipal separate storm sewer systems, and (4) reduce pollutants in construction-site runoff discharged to municipal separate storm sewers. Included is the control of stormwater pollution from diffuse sources that is ultimately discharged via a municipal separate storm sewer.
X	Recycled Water Distribution	This was a new category for the CWNS 2004. It includes costs associated with conveyance of the recycled water (wastewater reused after removal of waste contributed by humans) and any associated rehabilitation/replacement needs. Examples are costs for pipes to convey treated water from the wastewater facility to the property of the drinking water facility (either the drinking water distribution system or the drinking water treatment facility) and the purchase of the equipment for application of the effluent if the land on which it is to be applied is publicly owned. The costs associated with additional process units to increase the level of treatment to the level of potable, or less than potable but greater than that normally associated with surface discharge needs, are reported in Category II.

**Table F-2. CWNS 2004 Other Documented Needs Categories**

Category	Name	Description
VII-A	NPS Control: Agriculture (Cropland)	All costs that address nonpoint source pollution control needs associated with agricultural activities such as plowing, pesticide spraying, irrigation, fertilizing, planting and harvesting. Some typical best management practices that could be used to address agriculture (cropland) needs are conservation tillage, nutrient management, irrigation water management, and structural best management practices (e.g., terraces, waterways).
VII-B	NPS Control: Agriculture (Animals)	All costs that address NPS pollution control needs associated with agricultural activities related to animal production such as confined animal facilities and grazing. Some typical best management practices that could be used to address agriculture (animal) needs are animal waste storage facilities, animal waste nutrient management, composting facilities and planned grazing. If the facility has a National Pollutant Discharge Elimination System permit, these needs are classified as Category VIII, Confined Animal–Point Source.
VII-C	NPS Control: Silviculture	All costs that address NPS pollution control needs associated with forestry activities, such as removal of streamside vegetation, road construction and use, timber harvesting, and mechanical preparation for the planting of trees. Some typical best management practices that could be used to address silviculture needs are preharvest planning, streamside buffers, road management, revegetation of disturbed areas and structural practices, and equipment (e.g., sediment control structures, timber harvesting equipment).
VII-D	NPS Control: Urban	All costs that address NPS pollution control needs associated with new or existing development in urban or rural settings, such as erosion, sedimentation and discharge of pollutants (e.g., inadequately treated wastewater, oil, grease, road salts and toxic chemicals) into water resources from construction sites, roads, bridges, parking lots and buildings. Some typical best management practices that could be used to address urban needs are wet ponds, construction site erosion and sediment controls, sand filters and detention basin retrofit. Needs related to Federal or State highways generally would be reported under this category because State and Federal highways are State-owned. Needs associated with the portions of a road that go through an MS4 should be reported in Category VI, Stormwater Management Program. Costs associated with managing urban runoff in areas not covered by applicable phase I or II stormwater NPDES permits should be reported in this category.
VII-E	NPS Control: Ground Water Protection (Unknown Source)	All costs that address ground water protection NPS pollution control needs such as wellhead and recharge area protection activities. Any need that can be attributed to a specific cause of ground water pollution, such as leaking storage tanks, soil contamination in a brownfield or leachate from a sanitary landfill, should be reported in that more specific category.

**Table F-2. CWNS 2004 Other Documented Needs Categories (continued)**

Category	Name	Description
VII-F	NPS Control: Marinas	All costs that address NPS pollution control needs associated with boating and marinas, such as poorly flushed waterways, boat maintenance activities, discharge of sewage from boats, and the physical alteration of shoreline, wetlands and aquatic habitat during the construction and operation of marinas. Some typical best management practices that could be used to address needs at marinas are bulkheading, pumpout systems and oil containment booms.
VII-G	NPS Control: Resource Extraction	All costs that address NPS pollution control needs associated with mining and quarrying activities. Some typical best management practices that could be used to address resource extraction needs are detention berms, adit closures and seeding or revegetation. Any costs associated with facilities or measures that address point source discharges from mining and quarrying activities that have an identified owner should be included in Category IX, Mining–Point Source.
VII-H	NPS Control: Brownfields	All costs that address NPS pollution control needs associated with land that was developed for industrial purposes and then abandoned, which might have residual contamination. All costs for work at brownfields should be included in Category VII-H regardless of the activity. Some typical best management practices that could be used to address needs at brownfields are ground water monitoring wells, in situ treatment of contaminated soils and ground water, and capping to prevent stormwater infiltration.
VII-I	NPS Control: Storage Tanks	All costs that address NPS pollution control needs associated with tanks designed to hold gasoline or other petroleum products or chemicals. The tanks may be located above or below ground level. Some typical best management practices that could be used to address storage tank needs are spill containment systems; in situ treatment of contaminated soils and ground water; and upgrade, rehabilitation or removal of petroleum/chemical storage tanks. If these facilities or measures are part of addressing NPS needs at abandoned, idle and underused industrial sites (brownfields), the costs go in Category VII-H, Brownfields.
VII-J	NPS Control: Sanitary Landfills	All costs that address NPS pollution control needs associated with sanitary landfills. Some typical best management practices that could be used to address needs at landfills are leachate collection, on-site treatment, gas collection and control, capping and closure.

**Table F-2. CWNS 2004 Other Documented Needs Categories (continued)**

Category	Name	Description
VII-K	NPS Control: Hydromodification	Costs that address NPS pollution control needs associated with best management practices for any alteration of the hydrologic characteristics of coastal and noncoastal waters, which in turn could cause degradation of water resources. Examples of such activities include channelization and channel modification, dams, and stream bank and shoreline erosion. In the case of a stream channel, hydromodification is the process whereby a stream bank is eroded by flowing water, typically resulting in the suspension of sediments in the watercourse. Some typical best management practices that could be used to address hydromodification needs are conservation easements, swales, filter strips, shore erosion control, wetland development or restoration and bank or channel (grade) stabilization. Any work involving wetland or riparian area protection or restoration is included under this category.
VI-L	NPS Control: Individual/Decentralized Sewage Treatment	Costs associated with the rehabilitation or replacement of individual or community sewage disposal systems and the treatment portion of other decentralized sewage disposal technologies. Costs related to the development and implementation of on-site management districts may be included (but not the costs of ongoing operations of such districts). If a publicly owned centralized collection and treatment system is constructed or if sewers are installed to connect the service area to an existing collection system, the costs should be separately reported in Categories I and IV-A, respectively. Public ownership is not required for decentralized systems. Costs could include the limited collection systems associated with the decentralized system. This was a new category for CWNS 2004, costs were previously reported as Categories I, VII-D and VII-E
VIII	Confined Animal–Point Source	Costs that address a combination of unit processes or best management practices designed to address water quality or public health problems caused by point source pollution from animal production activities that are subject to the concentrated animal feeding operations (CAFO) regulations.
IX	Mining–Point Source	Costs that address a combination of unit processes or best management practices designed to address water quality and/or public health problems caused by point source pollution from mining and quarrying activities.
XI	Estuary Management	This was a new category for the CWNS 2004. It includes costs associated with a limited number of estuary management activities that may not be appropriately included in other needs categories. Some typical estuary best management practices are habitat protection for aquatic species, fisheries/oyster bed/shellfish restocking or restoration, fish ladders, rejuvenation of submerged aquatic vegetation, artificial reef establishment, control of invasive introduced vegetative and aquatic species, and water control structures for flow regime and salinity. Most activities included in Comprehensive Conservation and Management Plans prepared for estuaries designated under section 320 would be considered point or nonpoint source technologies and should be included in the appropriate category.

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